

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

ALLOWABLE SUBJECT MATTER

The Examiner's indication of the allowability of the subject matter of claims 4-34 is respectfully acknowledged.

Claim 1 has been amended to incorporate the allowable subject matter of claim 4, and claims 5, 6, 7 and 9 have been amended to depend from claim 3, which depends from amended claim 1. In addition, allowable claim 15 has been amended to be rewritten in independent form.

No new matter has been added, and no new issues with respect to patentability have been raised.

Accordingly, it is respectfully submitted that amended independent claims 1 and 15 as well as each of claims 3 and 5-33 respectively depending therefrom are now in condition for immediate allowance.

It is noted that some minor amendments have been made to the claims to make minor grammatical improvements and/or to correct minor antecedent basis problems. These amendments, however, are not related to patentability and do not narrow the scope of the claims either literally or under the doctrine of equivalents.

Still further, new claims 38-52 have been added to recite further patentably distinguishing features of the present invention. In particular, new claim 38 recites a limitation

which has been deleted from amended claim 16; new claim 39 is directed the feature of parallel springs shown, for example, in Figs. 6A and 6B; new claim 40 is directed to the structure shown, for example, in Fig. 3B; new claims 41-48 and 49 correspond, respectively, to claims 16-23 and 39; and new claims 50-52 are directed to the position at which the first actuator is held. No new matter has been added, and it is respectfully submitted that the new claims are also in condition for immediate allowance based on their dependence from allowable claims 1 and 15, respectively.

Claims 2, 4 and 35-37, moreover, have been canceled, without prejudice, so that all of the pending claims are now in condition for immediate allowance.

CLAIM FEE

The application was originally filed with 37 claims, of which 4 were independent. The application, as amended, now contains a total of 47 claims, of which 2 are independent. Accordingly, a check in the amount of \$180.00 is enclosed to cover the Patent Office fee for 10 additional claims. In addition, authorization is hereby given to charge any additional fees which may be required, or to credit any overpayment, to Account No. 06-1378.

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In view of the foregoing, entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 1, 3, 5-7, 9, 11-17, 19-21, 23 and 24 have been amended as follows:

1. (Amended) A scanning unit for moving an object to be moved [along at least one axis], comprising:

a first actuator for moving the object along a first axis, the first actuator having a pair of end portions, the object being attached to one of the end portions, and the first actuator being held at a position in [the] a vicinity of [the] one of a dimensional center [in dimension or the] and a center of gravity thereof; and

a second actuator for moving the object along a second axis different from the first axis.

3. (Amended) The scanning unit according to claim 1, wherein the first actuator comprises a pair of stacked piezoelectric actuators and a connection member for connecting the stacked piezoelectric actuators in series [, and the connection member is held].

5. (Amended) The scanning unit according to claim [4] 3, wherein the second actuator comprises a stacked piezoelectric actuator which is extendable along the second axis.

6. (Amended) The scanning unit according to claim [4] 3, wherein the second actuator has a pair of end portions, and one

of the end portions [being] is connected [with] to the first actuator [and the other one of the end portion being fixed].

7. (Amended) The scanning unit according to claim [4] 3, wherein the second actuator is held at a position in [the] a vicinity of [the] one of a dimensional center [in dimension or the] and a center of gravity thereof.

9. (Amended) The scanning unit according to claim [4] 3, further comprising a third actuator for moving the object along a third axis different from both the first axis and the second axis.

11. (Amended) The scanning unit according claim 9, wherein:

the second actuator has a pair of end portions, one of the end portions being connected to the first actuator, and the other one of the end portions being fixed, and

the third actuator [having] has a pair of end portions, one of the end portions being connected to the first actuator, and the other [end] one of the end portions being fixed.

12. (Amended) The scanning unit according to claim 9, wherein:

the second actuator is held at a position in [the] a vicinity of [the] one of a dimensional center [in dimension or the] and a center of gravity thereof, and

the third actuator is held at a position in [the] a vicinity of [the] one of a dimensional center [in dimension or the] and a center of gravity thereof.

13. (Amended) The scanning unit according to claim 12, wherein:

the second actuator has a pair of end portions, one of the end portions being brought into contact with a portion close to an end portion of the first actuator to which the object is attached, and

the third actuator [having] has a pair of end portions, one of the end portions being brought into contact with a portion close to the end portion of the first actuator to which the object is attached.

14. (Amended) The scanning unit according to claim 9, wherein the second actuator and the third actuator [comprises] comprise a common cylindrical piezoelectric actuator.

15. (Amended) [The] A scanning unit [according to claim 1, further] for moving an object to be moved, comprising:

a first actuator for moving the object along a first axis,
the first actuator having a pair of end portions, the object
being attached to one of the end portions, and the first actuator
being held at a position in a vicinity of one of a dimensional
center and a center of gravity thereof;

a movable member for holding the first actuator;
a second actuator for moving the movable member along a
10 second axis different from the first axis; and
a first guide mechanism for restricting movement of the
movable member along the first axis.

16. (Amended) The scanning unit according to claim 15,
wherein the second actuator comprises a pair of stacked
piezoelectric actuators which are extendable along the second
axis, and each of the stacked piezoelectric actuators has a pair
5 of end portions, one of the end portions being connected to the
movable member through the first guide mechanism [, the other one
of the end portions being fixed].

17. (Amended) The scanning unit according to claim 16,
wherein the first guide mechanism [has] comprises a pair of
elastic members provided on both sides of [a movable plate] the
movable member along the second axis.

19. (Amended) The scanning unit according to claim 18,
wherein:

the second actuator comprises a pair of stacked
piezoelectric actuators which are extendable along the second
axis, each of the stacked piezoelectric actuators having a pair
5 of end portions, one of the end portions being connected to the

movable member through the first guide mechanism, and the other one of the end portions being fixed, and

10 the third actuator comprises a pair of stacked piezoelectric actuators which are extendable along the third axis, each of the stacked piezoelectric actuators having a pair of end portions, one of the end portions being connected to the movable member through the second guide mechanism, and the other one of the end portions being fixed.

20. (Amended) The scanning unit according to claim 19, wherein the first guide mechanism [having] comprises a pair of elastic members provided on both sides of the movable [plate] member along the second axis, and the second guide mechanism
5 [has] comprises a pair of elastic members provided on both sides of the movable [plate] member along the third axis.

21. (Amended) The scanning unit according to claim 20, wherein the end portion of the stacked piezoelectric actuator of the second actuator [is] connected to the movable member is connected to the movable member through [a third] one of the
5 elastic [member] members of the first guide mechanism, and the end portion of the stacked piezoelectric actuator of the third actuator [is] connected to the movable member is connected to the movable member through [a second] one of the elastic [member] members of the second guide mechanism.

23. (Amended) The scanning unit according to claim 22,
wherein the elastic [member] members of the first guide mechanism
[includes] each include a rectangular spring having an elongated
slit extending along the third axis, and the elastic [member]
5 members of the second guide mechanism [includes] each include a
rectangular spring having an elongated slit extending along the
second axis.

24. (Amended) The scanning unit according to claim 9,
further comprising a movable member which supports the second
actuator and which is supported by the third actuator,

wherein the second actuator [having] has a pair of end
5 portions, one of the end portions being connected to the first
actuator, and the other one of the end portions being connected
to the movable member, and

wherein the third actuator [having] has a pair of end
portions, one of the end portions being connected to the movable
10 member, and the other one of the end portions being fixed.